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INVENTION DISCLOSURE FORM

This section for internal use only:
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9-3126

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Information contained in this disclosure is requested for public dissemination or released on: _____

This disclosure includes:
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Attachments? ☒ Yes ☐ No

INVENTOR(S)(Legal Name)	CURRENT HOME ADDRESS:	CITIZEN OF:
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TITLE OF THE INVENTION:	User aware communication device

INSTRUCTIONS
All questions must be answered before the Disclosure can be processed. Attach separate pages when necessary. Sign and date each page and any additional pages in ink using your full legal name. Please have two witnesses sign and date every page including supplements to the Invention Disclosure. A co-inventor cannot be a witness.

QUESTIONS BELOW MUST BE ANSWERED: (Attach separate pages when necessary)
The field of technology the Invention relates to: ☒ Layer 1 ☒ Layer 2 ☒ Layer 3

☒ 802._____ ☒ Other _____ ☒ TDD ☒ FDD ☒ TDSCDMA ☒ OFDM

☒ ARIB ☒ UMTS ☒ CDMA ☒ CDMA 2000

Please classify your Invention as: <u>yes</u> System _____ Chip _____ UE

Will this be submitted to a standards body? If so, please identify the form number and date of submission – and attach a copy (or insert hyperlink): <u>No</u>

When did you first begin to work on the invention? Redacted

Did any work concerning the invention arise in the course of any contract? ☐YES ☒ NO; if yes, identify:<u>N/A</u>

Is further development of your invention now in progress or scheduled? ☒YES ☐ NO

Are there any plans to publish or otherwise disseminate any aspect of this invention in the future?
☒YES ☐NO; if yes, please identify and list dates. <u>No date. It may become an article some day.</u>

READ AND UNDERSTOOD BY:	
Inventor (1):	Witness #1
Inventor (2)	Witness #2
Date:	Date:

Description of the invention

Describe your invention in specific detail so that a person who is technically competent, but who may not be familiar with your line of work will be able to understand it. You must give sufficient information to allow someone to make and use the invention without undue experimentation. The description should include the following:

a.   The background of the state of technology existing before your invention: <u>No examples of this idea has been developed to my knowledge.</u>

b.   The problem solved by the invention: <u>A irless communication device (not limited to) is described such that the device adjusts its parameters, configuration, etc according to user behavior</u>

c.   The advantages of your invention over the prior work: <u>there is no prior art to my knowledge</u>

d.   Drawings illustrating/describing your invention: <u>N/A</u>

e.   Whether the part, (or its form or interconnection) is *ESSENTIAL* to the invention. For example, ask yourself, "If this part were left out, or changed, would the remaining device still be my invention?" Or, "If this part were changed or left out, would the invention still work? This may include any critical limitations such as angle, temperature, size, etc. <u>what is described here is a summary form of the invention that describe the idea and its application to wireless devices. The idea can be extended to other devices or other similar operation modes. But, what is described here is the essence of the concept</u>

f.   Provide labeled sketches to detail your invention. Be sure all essential parts are shown on the sketch, and try not to include extraneous details. Measurements are not required, unless they are essential to the operation of the invention. <u>N/A</u>

Prior Art

Attach a copy and citation of all publications, patents, etc. which are known to you, which relate to your invention, and which would be important to consider in understanding how your invention differs from prior work.

Alternatives

You have described the best way to build (perform) your invention. Now consider the alternatives. Is there any other way to perform your invention? <u>yes</u> If so, how? <u>what is decribed here is the essence of the concept and its application to wireless devices. There can be numerous different ways to implement the idea, however the fundamental idea described here is of the essence.</u>

NOTE: *InterDigital patent counsel should be notified immediately of any contemplated releases.*

Please return completed form with attachments via e-mail to:

Invention Disclosures@InterDigital.com

READ AND UNDERSTOOD BY:	
Inventor (1):	Witness #1
Inventor (2)	Witness #2
Date:	Date:

If you have any questions regarding this disclosure please contact:

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Inventor (2)	Witness #2
Date:	Date:

User aware communication device

What is the invention?

The invention described here is a communication device that adjusts its parameters, processing, or other configuration, or behavior, based on the detected patterns in the way that the user uses the device, or habits of the user that reflect as patters that can be detected by the device. This is in effect a type of cognitive device that makes decisions and takes actions based on those decisions. Although we define the rest of the invention as if the device is a wireless communications terminal, it is broadly applicable to all communications devices, and even all devices where user interaction with the device is necessary.

How is the invention different from prior art?

The concept and the device operating on this concept as defined here do not exist in the prior art. Therefore it is a new concept and new type of device that is being described here.

Description of the invention:

Let's describe the invention for an application in wireless communications. Let's assume that the device is a user terminal, a cell phone. In traditional cell phones there are a number of parameters that are either set by the network such as service QoS and capabilities, or by the wireless device itself, such as various set points, signal levels. Each such setting corresponds to a configuration and events trigger change from one configuration to another. For instance, some service types may require use of diversity antennas and combining of diversity signals in order to achieve the required QoS. Or, different service types require different FER or SNIR etc (QoS) that are set by setting thresholds in power control algorithms. All of these changes happen according to a state machine operation. One event happens, it triggers a change, and another event follows. There is no cognitive thinking involved.

In the invention described here, a cognitive wireless device would monitor user's behavior and detect patterns that will in turn cause the device to change parameters, configurations, or change its state. For example, if the device detects that the user has a habit of concluding a conversation and forgetting hanging up as some people embarrassingly do once in a while, it will shorten the time out timer setting and turn off the display, call counter, etc quicker. Another example may be that if a user has a tendency to send a picture almost every time the user dials a particular number, the device would bring up the stored pictures menu when that number is dialed. Yet another example maybe that if a user has a tendency to turn up the volume every time the user puts on the hands-free kit, the device would automatically increase the volume when it detects the hands-free being plugged in and when lower the volume when it is taken off.

There can be numerous examples found in this regard. But he essence is that the device detects the patterns in the user's behavior, creates a new rule, and applies that rule. The rules can be changed, they can expire, or new rules can be added. Also, some rules may have priority over others.